

ABB FACTS  
Project Execution Model

## Your guarantee for a successful project

All of our systems are tailor-made to a specific site and client. To guarantee the quality of the system and the accuracy and speed of the project, ABB FACTS has developed and implemented a new project execution model. The ABB FACTS Project Execution Model is based on best practice methods and years of experience from hundreds of installations. The model establishes the project as a closed system for scope, price and time. Once the project has been placed in these three dimensions, it can be implemented, monitored and controlled. Success is thereby guaranteed.

For each project, a specialized team with the skills and resources necessary to implement the system is also assembled. The client is considered an important member of the team and is responsible for supplying system and site data and progressively approving document output from the project. This active involvement of the client from day one is a prerequisite for avoiding late changes that may jeopardize the success of the project.

## Project execution model

The ABB FACTS Project Execution Model is not one model, but a collection of concepts that each describe and highlight important aspects of the project. The most prominent components of the project execution model are:

- The gate model, which defines the checkpoints in the project
- The process models, which define the state-of-the-art work processes for all technical areas
- The **time schedule**, which defines the timeline for the project
- The list of documents for approval, which defines the documents that need to be accepted by the client

The ABB FACTS Project Execution Model is unique because all of the above concepts have been harmonized with each other to form one common entity. Each part fits hand-in-glove with all the others, thereby ensuring that no gaps occur in the project or that important aspects are overlooked. **The project execution model is your guarantee that the right product will be delivered at the right time.**

Implementation of the project execution model has enabled ABB FACTS to substantially increase control of projects, reduce project delivery time and improve quality. The ABB FACTS Project Execution Model ensures an optimal work process and that state-of-the-art methods are used throughout your project.

The following pages will give a brief description of the most prominent components.

## Gate model

During the first few months of the project, the **concept design** is set. Changes after the **concept design** phase will affect the detailed design work, and may also create changes to already purchased materials.

The gate model is used as defined checkpoints where pending matters can be reviewed in a meeting between the client and ABB to assure mutual understanding. During these meetings, deviations can also be detected relating to scope, price or time in the project.

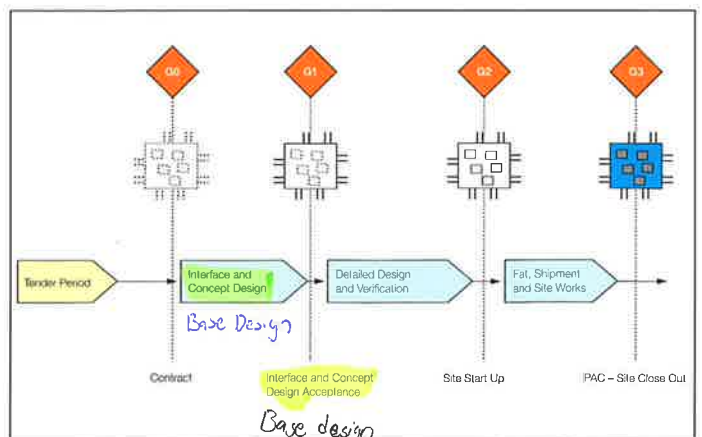


## Details about the gate model

The gate model used by ABB FACTS consists of a pre-project period and three project stages:

- The pre-project period includes the tender phase and ends at the official kickoff of the project at Gate 0.
- The **interface and concept design** stage is the startup phase of the project in which critical decisions affecting the entire project and the final product are taken.
- The detailed design and verification stage involves the actual design and manufacture of the equipment.
- The FAT (Factory Acceptance Tests), shipment and site work stage includes delivery and installation of the equipment, and ends when the client formally takes over the station.

The stages are divided into gates, which are high-level review points involving representatives from both the client and ABB. A gate meeting is a forum used to check progress and capture issues and concerns regarding the project. At the gate meeting, decisions are made as to whether and what corrective actions should be taken.





## Gate G0, official project kickoff

The first official project meeting takes place roughly two weeks after the contract has been signed. The appointed General Project Manager is introduced to the client. The information in the contract is reviewed with special focus on the system and network data.

## Gate G1, interface and concept design acceptance

This official project meeting typically takes place roughly three months after the start of the project. The interface and concept design is then reviewed and frozen.

## Gate G2, official site startup

This official project meeting should be held before the procurement of civil works, and is usually held nine to ten months after the start of the project. All upcoming shipments and site work are reviewed.



## Gate G3, official close-out of the project

The last official project meeting terminates the project and hands the system over to the client. All outstanding issues are documented on a pending points list upon energization of the station, and during this meeting, most of the pending matters are solved. The ABB FACTS support organization (After Sales) is introduced to the client, and service agreements, according to client needs, can be arranged.

## Process models

Moving on from the gate model we go one step deeper into the detailed processes.

The process models are the core of the project execution model in which actual project work takes place. Many different technical disciplines – such as electrical, mechanical, software and civil engineering – work in parallel with one another. Each technical discipline has its own state-of-the-art work processes that define the activities to be performed and the so-called deliverables (documents or products) to be produced during each stage. There is not just one, but a total of 18 different interconnected process models. These process models ensure that nothing is left behind or overlooked in the interfaces between the different disciplines.

## Time schedule

The time schedule is a direct reflection of the processes, where all interfaces between parties are assembled into a complex network. The processes thus advance from being a paper product to live processes actually used in setting up the time schedule. A delay in one area will propagate throughout the entire project and risk affecting the end-date of the project. Close monitoring of the time schedule is therefore performed throughout the project and corrective actions are taken early.

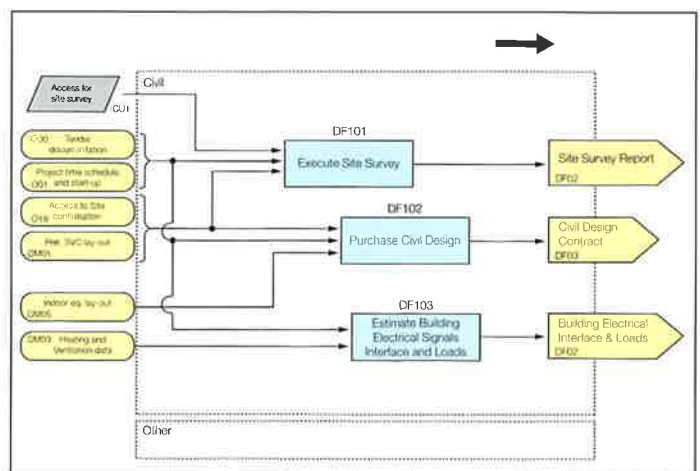
## List of documents for approval

The list of documents for approval adapts the project execution model to the specific project and defines the output of the project. The documents that are sent confirm the scope of the project, and approval by the client is necessary. The early documents set the conceptual design so that detailed design can be conducted. All documents on the list of "Documents for approval" must be approved by the client within two weeks of submission, and the procedures for this must be established at the outset of the project. If no reply for approval is sent to ABB FACTS during the specified period, it is understood that the deliverable has been approved.

## The client, an important member of the project team

The project is organized into a task force led by the General Project Manager that will serve as the interface towards the client. The General Project Manager is responsible for completing the project on time, ensuring that project personnel are performing efficiently and that the end-product conforms to ABB's high technical standards and the contractual commitments.

The task force consists of team members from all the technical disciplines involved, such as electrical, mechanical, software and civil engineering. ABB also sees the client as an important team member, responsible for supplying site data and progressively approving the output from the project. By establishing efficient channels for the exchange of information, the active involvement of the client is simplified. At the end of the day, the success of the project is all about supplying a system that meets the client's needs.



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